

ALTERNATIVE MEASURES OF UNEMPLOYMENT

Amaramo Sialaoa and Robin Clements consider how unemployment can be defined, what measures are available and how the trends in these measures compare over the last two years. The views expressed are not necessarily those of the Reserve Bank.

Introduction

In an environment where reducing inflation is a primary objective of economic policy, it is well known that one of the possible costs of adjustment is increasing unemployment. Therefore, it is important that statistical measures accurately convey the information required to assess the costs of disinflation. In this respect there are a number of alternative measures of unemployment, some of which give conflicting implications concerning the trend movements in unemployment rates.

The purpose of this article is to first ask what we would want an unemployment measure to capture. Secondly, the article examines the currently available measures of unemployment and their respective trends. The article concludes with an assessment of the available statistics in the light of the various possible concepts that we might wish to measure.

What to Measure

There is some debate as to which of the available measures of unemployment gives the most satisfactory picture of the real situation. The problem is complicated by the fact that there is no unanimous agreement as to how unemployment ought to be defined in the first place. Clearly, a lot depends on exactly what the figures are going to be used for. In broad terms, unemployment can be defined as the reflection of a mismatch between the level and/or structure of labour demand and supply. But this sort of definition covers people in a wide range of situations who are without jobs irrespective of their intentions to work or accept work. Depending on the particular usage intended for the measure, more specific definitions of unemployment can be developed.

Unemployment measures are typically required in the context of *economic*, social or fiscal (i.e. cost to government) applications. From an economic perspective, one wishes to measure the degree to which there is

unemployment because the economy is unable to supply sufficient employment opportunities. In other words, it should measure the proportion of the workforce that is involuntarily surplus to current needs but which could be absorbed rapidly if jobs were available. These are people without jobs but who are closely associated with the labour force through their intentions to find work i.e. those who are without jobs but show a genuine intention to obtain one. This desire can be ascertained from job-searching behaviour which considers the level of action being undertaken to obtain a job. An economic measure should therefore attempt to cover those without work who are actually seeking work.

From a *social* perspective, the economic measure of unemployment is too restrictive. By concentrating on those seeking employment, the economic statistic excludes a number of persons who, for example, are discouraged from searching because of a lack of perceived job prospects. A social measure of unemployment should be able to assist in gauging the social costs of unemployment and the likely pressure on social services. Therefore, a social measure would need to cover not only those who are seeking work but also those who, if offered the opportunity to work, would take it.

If our objective instead, is to consider the *fiscal* or budgetary cost to government of unemployment, then the best measure will be one that covers the unemployed who qualify for an unemployment benefit or receive other forms of government funded assistance. In this case, the measure needs to be able to assess accurately the total number of people who are eligible to receive assistance and, therefore, indicate the expenditure required by government on this assistance.

Measures of Unemployment Available

There are at present two frequent sources of unemployment data; the registration figures derived from

jobless persons enrolled with the Labour Department, and the Department of Statistics' Household Labour Force Survey (HLFS).¹ Each of these sources make available a number of alternative unemployment measures. The merits of these and their drawbacks are discussed below.

Registration Measures

Unemployment Benefit

Any unemployed person seeking employment of 30 hours or more a week who is legally entitled to work in New Zealand may register with the Labour Department. This includes persons who may or may not be eligible for the unemployment benefit. Individuals may be registered but not eligible for an unemployment benefit because of, for example, voluntarily quitting their employment, being dismissed for misconduct or because of being above pensionable age but choosing not to retire and then registering as unemployed. Married women who are not normally the principal income earner in a family are also ineligible for the unemployment benefit.

The unemployment benefit measure, based on those registered as unemployed who also receive a benefit, is precisely that which is required for a measure of the direct fiscal cost of unemployment. However, it should be recognised that some indirect fiscal costs of unemployment, such as the provision of subsidised work schemes, will not be captured by the benefit measure.

Registered Unemployment

Only those currently out of work (some may work part-time but still be registered) who are available for and willing to accept a full-time job (i.e. a job for 30 hours or more per week) can be registered as unemployed. In general, all those registered with the

¹ The Census of Population provides a third source of unemployment data but, because it is only conducted every five years and then becomes available with a considerable delay, it is not considered here.

Labour Department as unemployed can, by choice, apply for unemployment benefits. However, as mentioned above, there are reasons which preclude or delay the payment of benefits to some individuals. Historically a significant difference exists between the numbers registered as unemployed and those receiving assistance through unemployment benefits.

Registered unemployment figures cannot capture everyone who is unemployed and seeking permanent work. For example, it excludes the unemployed who choose not to register because they are ineligible for the unemployment benefit (e.g. married women); those not wishing to register on principle; and those who think their spell of unemployment is likely to be of relatively short duration. In addition, people who are seeking only part-time employment are not eligible to register even though those currently in part-time employment may.

Therefore it would appear that the registered measure of unemployment does not closely match any of the criteria set for what an unemployment measure might be required for. It certainly does not measure fiscal implications, because it includes persons who are not eligible for the unemployment benefit; it is not suitable as an economic measure, because it excludes those temporarily out of work and those who have not registered on principle, and may include some who are not genuinely interested in working; and it does not provide a good indicator of social unemployment for the further reason that it does not include a section of the workforce, such as some housewives, who may not be seeking work but who might accept work if it were offered.

Registered Unemployment Plus Subsidised Employment

It may be desirable to include with registered unemployment those on government subsidised work programmes since these also represent a fiscal expense and reflect an absence of permanent jobs for those

involved.

However, this measure suffers from the same problems as the registered measure. Including subsidised employment does capture an element of fiscal cost not covered by the benefit measure alone but the total measure remains an inadequate fiscal measure due to the inappropriate inclusion of persons who are registered as unemployed but not eligible for the benefit. Furthermore, because people on subsidised schemes are working and are not generally seeking alternative work, they should not normally appear in an ideally specified social measure of unemployment. The appropriate treatment of subsidised schemes in an economic measure is not so clear. While those on subsidised schemes may not generally be seeking alternative work, the very existence of those schemes is, at least to some extent, a reflection of a mismatch between 'normal' labour demand and supply. Because of the factors already mentioned, however, it is clear that the total registered plus subsidised employment figure is not a particularly satisfactory economic measure. In short, then, it would appear that registered unemployment plus subsidised employment is an inadequate measure under any of the alternative requirements.

HLFS Measures²

The HLFS definitions conform closely to the international standard definitions specified by the International Labour Organisation (ILO). The scope of the survey includes the usually resident, non-institutionalised, civilian population of New Zealand aged 15 years and over. Estimates are derived from a quarterly sample of approximately 11,500 households which are chosen on a statistically representative random basis from

rural and urban areas throughout New Zealand. A portion of these households are surveyed each week with the published HLFS results representing the averages over the entire quarterly period.

Persons are classified as without a job if they were without paid employment during the reference week of the survey. In particular, they must not have been employed for one hour or more during the reference week for financial payment or profit in the context of an employee/employer relationship or self-employment. This requirement contrasts markedly with the registration measures where part-time work is not sufficient reason for exclusion (especially if this part-time work is not actually declared). Thus, on account of this factor alone, it is quite plausible for HLFS measures to be lower than the registration measures.

HLFS is not directly concerned with measuring total unemployment, job demand or labour supply. Instead, it measures a concept the ILO describes as labour force 'attachment'. Attachment refers to a jobless person's presumed readiness to work. The degree of attachment is inferred from questionnaire answers to two key questions in the HLFS. These ask the unemployed person (a) what methods of job search he/she had used in the previous four weeks and (b) whether they were available to start work in the previous week. Depending on how both of these questions are answered, the jobless person is regarded as either 'strongly attached', 'marginally attached' or 'unattached'. (See figure 1 for a diagrammatic classification of these concepts.)

The attachment approach has been adopted by the ILO as the recommended method of measuring unemployment and stems from the need for a measure of unemployment which is responsive to changes in labour market conditions. In particular, the attachment approach focuses on active job-search behav-

² The material which follows describing the HLFS draws from 'Supplementary Measures of Joblessness', June 1987 quarter issue of *The New Zealand Labour Force*, Department of Statistics; and on the explanatory notes contained in that publication. However, none of the conclusions made in this article necessarily reflect those of the Department of Statistics.

Figure 1

Classifying the Non-Working Population according to Attachment Level (June 1987 quarter figures)

Not seeking work 798,500	Not Available 765,400	Unattached	
	Available 33,100		
Passively seeking work 8,300	Not Available 1,000	Marginally Attached	
	Available 7,300		
Actively seeking work 74,300	Not Available 9,300	Strongly Attached	Official Unemployed 65,000
	Available 65,000		

Surplus Workers 105,400	Job Seekers 82,600	Joblessness 115,700

our, as opposed to intentions, attempting to measure those persons who are most likely to accept work immediately should it be offered.

Using the concept of labour force attachment, a number of measures for unemployment can be derived depending on the degree of attachment.

The Official HLFS Measure

The official measure of unemployment (used as the key unemployment estimate for comparison across OECD countries) counts persons as unemployed only if they are without paid work, *actively* job-hunting and *available* to start work immediately. As illustrated in figure 1 this refers to all those *strongly* attached to the labour force.

However, this definition excludes a large number of persons who may want employment. Not every one who is out of work can start immediately — e.g. some may be ill

— while others, particularly those who have recently lost their job, may not have started job-searching yet. There are also persons in casual or part-time work, who are classified as employed, but who actually want full-time work and might therefore consider themselves only partially unemployed. All of these people form part of New Zealand's effective labour pool but they are not included in this HLFS unemployment figure.

In the June quarter 1987 HLFS, for example, 881,100 persons aged 15 years and over did not have a job (obtained from figure 1 as the sum of 798,500 + 8,300 + 74,300). Of these persons, 798,500 were not seeking a job, as they were ill, retired, managing households, studying, or were not currently interested in work for other reasons. A further 8,300 were seeking work but only passively through reading newspaper advertisements etc. Of the remaining 74,300 persons actively seeking

work, 9,300 were not immediately available to begin work. For the June quarter, that leaves 65,000 who satisfy all the requirements to be counted in the official measure of unemployment.

It is clear from this that significant numbers of people who want work, or who are available for work, are not covered by the official HLFS unemployment measure. As a result, this measure is likely to be too restrictive and therefore not an entirely adequate economic or social unemployment measure for our purposes.

Nevertheless, the ILO has deemed this measure to be the preferred one to meet its own requirements. If we were to take a strong version of the economic definition then we may wish to focus on those unemployed who can be absorbed into the workforce the easiest, and in that case we would restrict ourselves to only those actively seeking work and available i.e. the official definition.

However, if we are more interested in those persons that could be absorbed into the workforce over a relatively short period, but not necessarily immediately, then our concept of an economic measure should perhaps be wider.

The Surplus Worker Measure

This definition measures the immediately available surplus labour supply by counting all those out of work but currently available for work. It includes the *officially unemployed*, as well as those who are *available* but *not actively seeking* work. As shown in figure 1, there were 105,400 surplus workers in the June quarter being the sum of 33,100 + 7,300 + 65,000.

This measure emphasises the distinction between being available and not being available for work. However, in doing so the surplus worker measure still excludes those seeking work who may not have been available in the reference week but who may become available in the ensuing weeks. As a result this measure is likely to understate social unemployment but will probably overstate economic unemployment due to the inclusion of persons who are available but are not currently seeking work.

The Job Seeker Measure

The job seeker definition attempts to measure the market demand for jobs by counting all those aged 15 years and over without a job who are *seeking work* by active or passive means. For the June 1987 quarter the level of job seekers is calculated from figure 1 as 1,000 + 7,300 + 9,300 + 65,000 = 82,600.

Because the job seeker measure includes all those persons seeking work, it would appear that this measure would be a suitable economic measure of unemployment. The fact that a proportion of the total were seeking work but said that they were temporarily not available at that time would not seem to justify excluding them in our view. Even if they were unavailable as at the reference week

this restriction may not hold in subsequent weeks. Since the HLFS represents an average over the quarter, it would, therefore, appear more appropriate to include them in the economic measure.

The important thing to capture in the economic measure is trends in the number or rate of persons seeking work that could be absorbed over a relatively short period of time into the workforce. The job seeker unemployment measure does appear to achieve this when the measurement period is quarterly. As a social measure, however, excluding those who are not seeking work but available if work is offered, undermines its potential usefulness. It is this category which is most likely to contain the greatest concentration of discouraged workers who should certainly be covered by a social measure of unemployment.

The Joblessness Measure

This statistic is intended to measure the 'social demand' for jobs including 'hard core' unemployment. It includes everyone who wants work, whether or not they are strongly attached to the labour force. It is defined as those who are *officially unemployed* plus all those aged 15 years and over without a job who are either *seeking* work or *available* for work. For the June 1987 quarter the level of joblessness is calculated in figure 1 as 33,100 + 1,000 + 7,300 + 9,300 + 65,000 = 115,700.

With the job seeker measure as a preferred economic measure of unemployment, adding those that are not presently seeking work but are available would appear to produce a measure that quite closely aligns with the intent of a social measure of unemployment. (A possible reservation might be that, to the extent that the additional category is the one which is most likely to include persons who are not at all interested in employment, the measure may overstate the true level of social unemployment.)

Trends of the Various Unemployment Measures

Figure 2 shows the three registration measures of unemployment expressed as a proportion of the total labour force.³ Both registered unemployed and benefit rates evolve with a similar trend but with the former consistently exceeding the latter by, on average, some 1.5 percentage points. As noted earlier this difference reflects those who are registered as unemployed but either do not wish to apply for the benefit or are ineligible.

As discussed above, it may be desirable to supplement registered unemployment figures by accounting for subsidised employment as well. Figure 2 shows that the total level of fully subsidised employment has been relatively stable over the period shown. Thus while there has been a number of changes in the type of subsidised work programmes, such as the wind-down of the Project Employment Programme and the introduction of ACCESS, the addition of fully subsidised work schemes alters the profile for the unemployment rate little over the period shown other than to produce a higher level.

Figure 3 shows unemployment rates according to the HLFS measures of unemployment expressed as percentages of their respective labour force measures.⁴

As is to be expected, the official measure of unemployment provides the most conservative estimate of the level of the unemployment rate. In the June quarter of 1987, the official measure estimated unemployment at 4.1 per cent of the labour force. This compares with 5.2 per cent for job seekers, 6.5 per cent for surplus

3 It should be noted that the labour force statistic used for the registration unemployment rates, here and in published material, is derived from the 1981 Census of Population. This constant labour force measure will understate the size of the actual labour force and so will tend to increasingly overstate the reported unemployment rates over time. For example, the registered unemployment rate given in figure 2 for the June 1987 quarter is 5.9 per cent. Using an unofficial labour force estimate from the 1986 Census of Population would produce a lower rate of 5 per cent.

4 As part of the HLFS, estimates of the labour force are made each quarter.

Figure 2
Registration Measures Of The Unemployment Rate

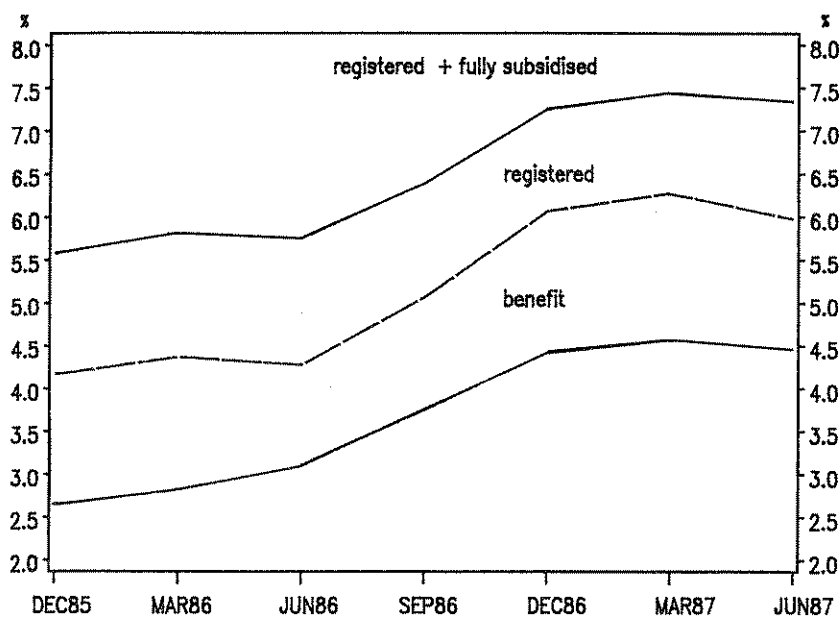
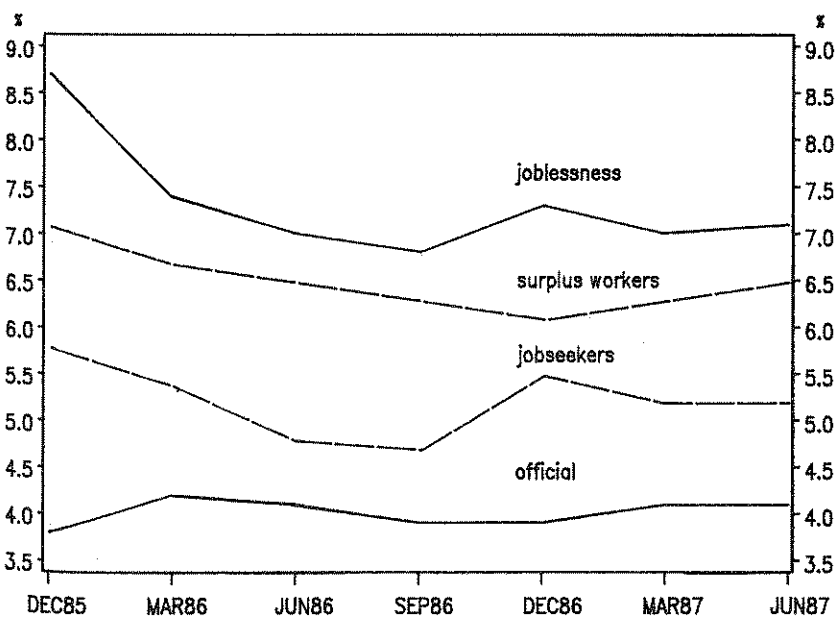


Figure 3
HLFS Measures Of The Unemployment Rate



workers and 7.1 per cent for the joblessness measure.

What is more interesting is the different trends evident within the HLFS measures themselves. The official HLFS unemployment measure has been remarkably stable, varying within a range of 3.8-4.2 per cent since the beginning of the survey in December 1985. This indicates that the growth in the level of strongly attached persons has been at more or less the same pace as the expansion of the labour force. This could have resulted in two ways. Either there has been little change in the composition or relative level of those strongly attached or, alternatively, new additions to this category have been matched by people becoming not available and/or seeking work less actively. If this latter proposition is true, then we would expect to find more significant increases in the other HLFS measures.

The surplus worker measure of the unemployment rate does not show any evidence of an increase for the period as a whole, although it has been increasing over the last two quarters alone. Indeed, up to the end of 1986, this measure has been on a declining trend. However, both the job seekers and joblessness measures do show some greater variability. There is some suggestion from the trends that the official measure even tends to move in the opposite direction to these two. Although the evidence is certainly not conclusive, this lends some support to the idea that shifts within levels of attachment may be influencing the measured trends in HLFS unemployment.

The other relevant observation with respect to the trends is how the job seeker and joblessness HLFS measures declined steadily until September 1986 at which time they began to increase, then eased back somewhat during the first half of 1987. By contrast the registration measures began a rather more marked increase one quarter earlier, after a relatively stable period.

What is apparent is that the HLFS

measures as a group portray a picture of the general trend in unemployment over the last seven quarters which is rather different from that given by the registration measures. The official measure is the only HLFS figure that indicates any increase over the period as a whole, and that is only slight, while the other three all suggest falls over the period (although recent levels are higher than those during much of 1986). By contrast, all the registration measures point to a worsening rate of unemployment, during the entire period.

Conclusions

This article began by discussing some of the reasons an unemployment measure might be required. Using the definitions that came from these requirements a number of alternative measures were assessed. From this assessment it is clear that there is no one 'best' measure of unemployment since this depends on exactly what the measure is required for. There are, however, preferred measures for the various concepts of unemployment that were identified. The article went on to briefly compare the recent trends in the various measures available and noted the main differences, especially the different trends in the registration-based figures versus the HLFS figures.

As an *economic* measure of unemployment, the *HLFS job seekers* measure is preferred in our view, primarily because of its focus on persons who have responded as having recently been seeking work. This approach is somewhat less restrictive than the official HLFS measure, although still narrower than the joblessness measure which includes people who are not seeking work but are available. (Recall that the official measure is likely to be the most useful for international comparisons, however.) The job seekers definition is preferred over the registration measures mainly because the registration measures include people that are not fully unemployed, such as part-time workers, and are also more likely to include some people not seriously interested in work. The registration measures also exclude people who should more correctly be included, such as those who are seeking work but choose not to register as unemployed.

The *HLFS joblessness* measure is the better *social* unemployment measure because it not only incorporates the economic measure, as a social measure should properly do, but also includes those not seeking work but available to begin work were it offered. By complementing the economic measure in this way, the joblessness measure captures that part of the non-working labour force

that may be discouraged from searching for a job but still wish to be employed.

The *fiscal cost* measure of unemployment is clearly provided by the registration *benefit definition*. By recording those people that qualify to receive the unemployment benefit, this measure directly indicates movements in the related fiscal expenditure. An alternative measure, combining those on the benefit and those on fully subsidised work schemes would, however, provide a more complete indicator of total fiscal cost in relation to the support of the unemployed. Once again it would depend precisely on what was wanted from the measure.

In general terms it would appear that the internationally accepted HLFS measures, as a group, should be given preference over the registration measures, at least with respect to economic and social measures of unemployment, the most important reason being that the HLFS framework is conceptually superior for analysing unemployment trends. This suggests that, wherever possible, economic and social analysis and reporting of unemployment statistics should generally be based on the HLFS measures.

